

What is claimed is:

1 1. An apparatus for punching CMP machine backing film,
2 comprising:

3 a base for holding the backing-film;

4 a first plate disposed on the base in a manner such that
5 it moves between a first position and a second position,
6 wherein the first plate abuts the backing-film when it is
7 located at the second position; and

8 a second plate, having a plurality of punches, disposed
9 on the base in a manner such that it moves between a third
10 position and a fourth position, wherein the first plate is
11 located at the first position when the second plate is located
12 at the third position, and the first plate is located at the
13 second position when the second plate is located at the fourth
14 position so that the punches pass through the first plate to
15 punch the backing-film.

1 2. The apparatus as claimed in claim 1, wherein the first
2 plate is provided with a plurality of lead holes corresponding
3 to the punches of the second plate.

1 3. The apparatus as claimed in claim 1, wherein the base
2 is provided with a concave portion for the backing-film
3 disposing thereupon.

1 4. The apparatus as claimed in claim 1, further
2 comprising:

3 a cylinder, connecting with the second plate, for moving
4 the first plate and the second plate; and

5 a plurality of main rods, disposed on the base, for
6 guiding the movement of the first plate and the second plate;
7 and

8 a plurality of connecting members connecting the first

9 plate and the second plate in a manner such that the first
10 plate moves relative to the second plate.

1 5. The apparatus as claimed in claim 4, wherein the first
2 plate is provided with a plurality of first through holes,
3 and the second plate is provided with a plurality of second
4 through holes corresponding to the first through holes, and
5 the main rods pass through the first through holes and the
6 second through holes.

1 6. The apparatus as claimed in claim 4, wherein each of
2 the connecting members is provided with an opening for
3 connecting the first plate and the second plate.

1 7. The apparatus as claimed in claim 4, further
2 comprising:

3 a gas-supplying device, communicating with the cylinder
4 and supplying gas to the cylinder;

5 two buttons electrically coupled to the gas-supplying
6 device, wherein the gas-supplying device supplies gas to the
7 cylinder when the buttons are actuated at the same time; and

8 an actuating rod connecting the cylinder and the second
9 plate.

1 8. A preventive maintenance method for CMP machine
2 backing film, comprising:

3 (a) providing a punching apparatus;

4 (b) providing the CMP machine having a shaft and a
5 detachable top ring disposed on the shaft, wherein the top
6 ring is provided with a plurality of air holes, a detachable
7 guide ring, and a replaceable backing-film, and the
8 backing-film is pre-drilled by the punching apparatus to
9 produce a plurality of holes that correspond to the air holes;

- 10 (c) disassembling the top ring from the shaft before the
- 11 preventive maintenance for the backing-film proceeds;
- 12 (d) cleaning the top ring after disassembling the guide
- 13 ring from the top ring and removing the used backing-film;
- 14 and
- 15 (e) putting the new backing-film on the top ring and
- 16 assembling the top ring to the shaft.